Hearing Conservation Update
14 JAN 2015
LCDR Andrew Hayes

Naval Air Forces Top Ten Aeromedical Issues (2014)

1. Spatial Disorientation
2. Fatigue Mitigation
3. Hypoxia & DCS UAS
4. UAS operator selection @ aeromedical standards/waivers
5. Hearing Protection
6. Whole-body vibration leading to M/S injury
7. Motion sickness
8. Vision Enhancement / Protection
9. EMALS / Magnetic Environment Exposure
10. CBRNE

PARDON OUR NOISE

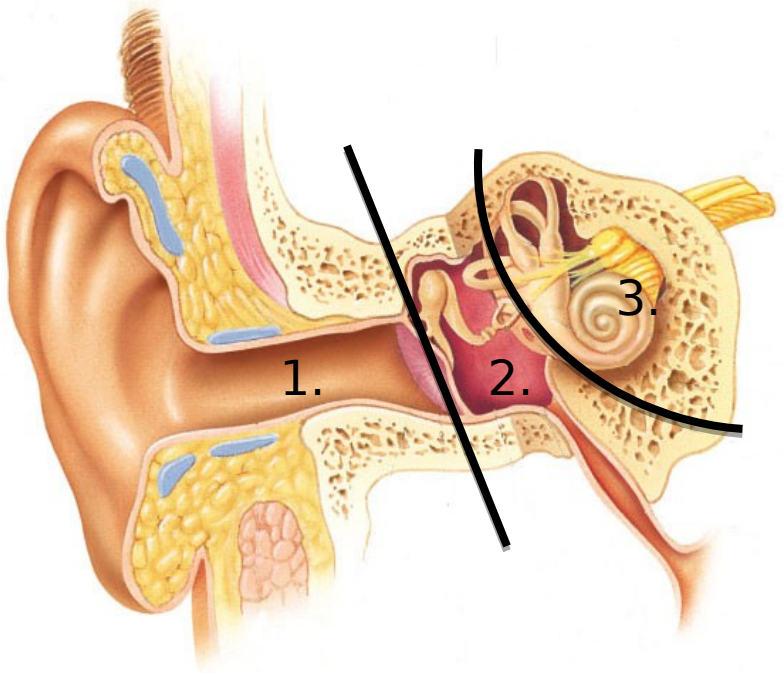
Learning Objectives

- Discuss Anatomy and Physiology of the Ear
- Types of Ear Disorders
- Noise Measurement
- Audiometric Interpretation
- Hearing Protection Products in Naval Aviation
- Future Hearing Protection Products
- Navy Audiology Specialty Leader Update and 2dMAW Hearing Conservation Initiatives

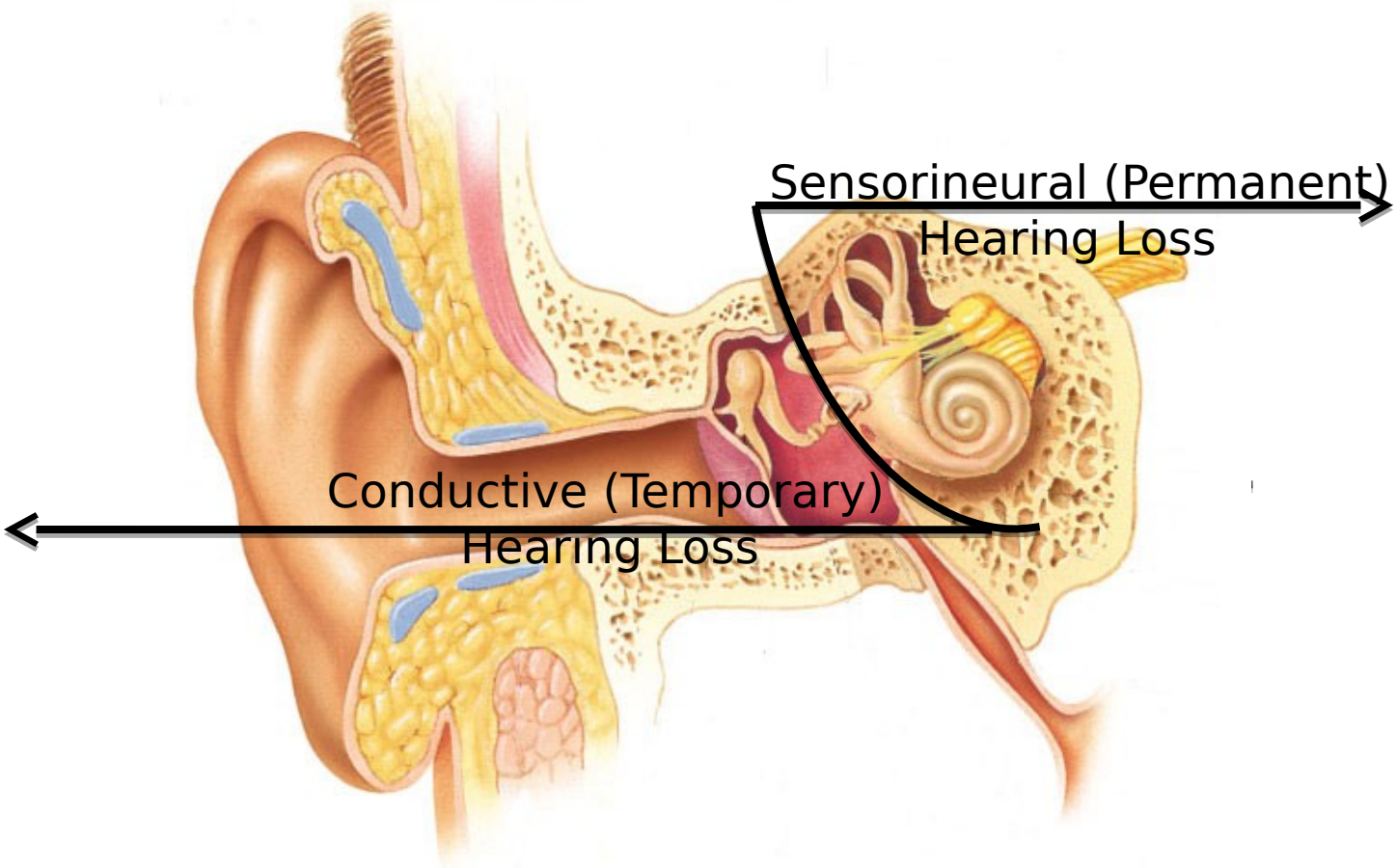
Anatomy and Physiology of the Ear

Three divisions of the human ear

1. **Outer ear**: acoustic energy
2. **Middle ear**: mechanical energy
3. **Inner ear**: hydroelectric energy



Ear Disorders



Ear Disorders:
Noise induced hearing loss

Undamaged Hair Cells in the cochlea

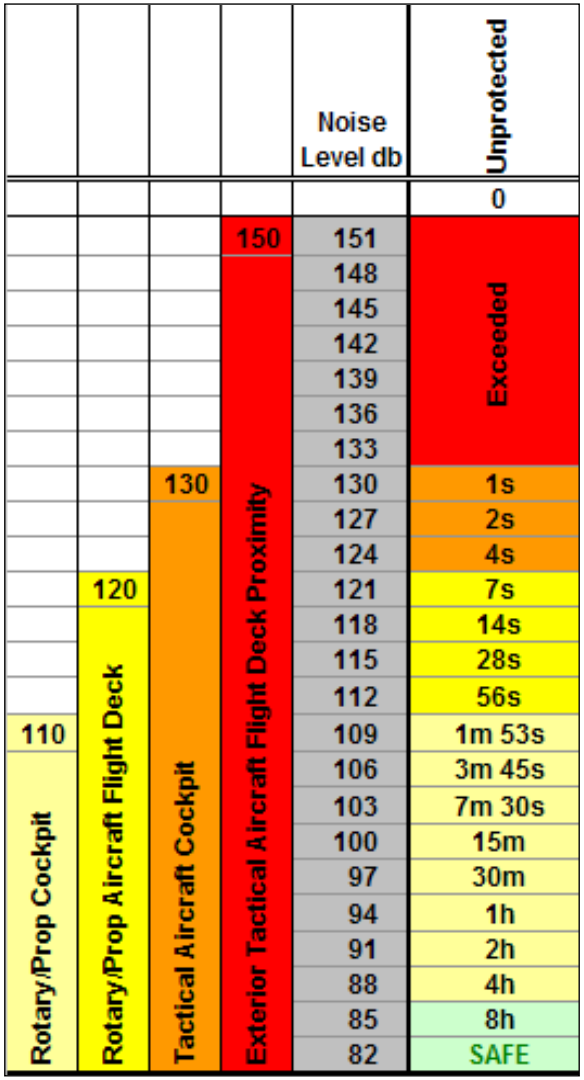
Damaged Hair Cells in the high frequency region of the cochlea

Noise Measurement

You can monitor hazardous noise with your smart phone microphone using sound level meter apps, accurate through 120dBA.

Noise Measurement

Allowable Noise Exposures*

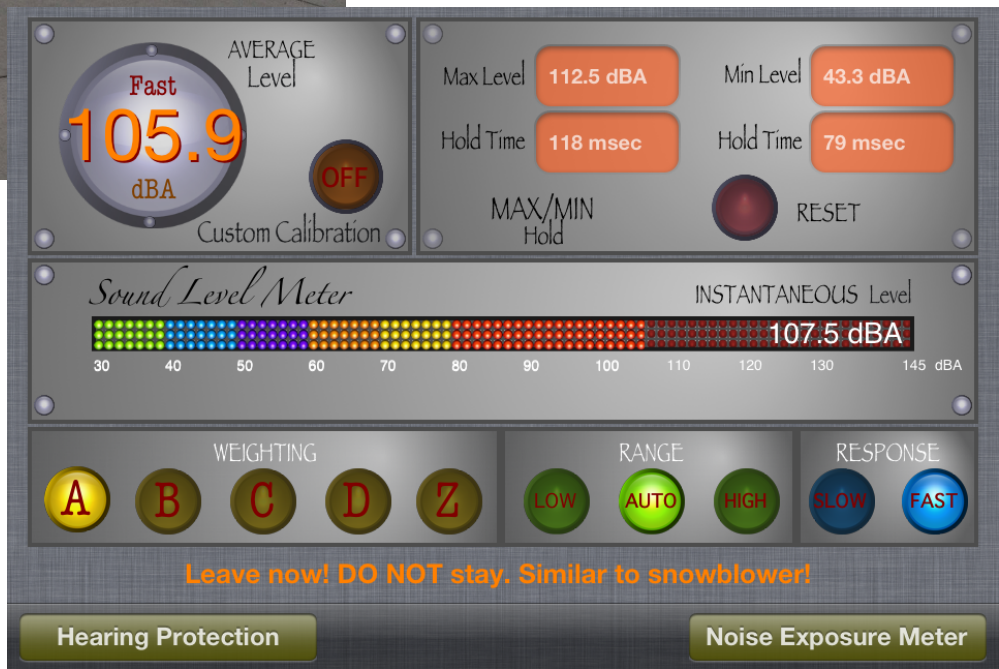


***American Conference on Governmental Industrial Hygienists (ACGIH) Threshold Limit Value**

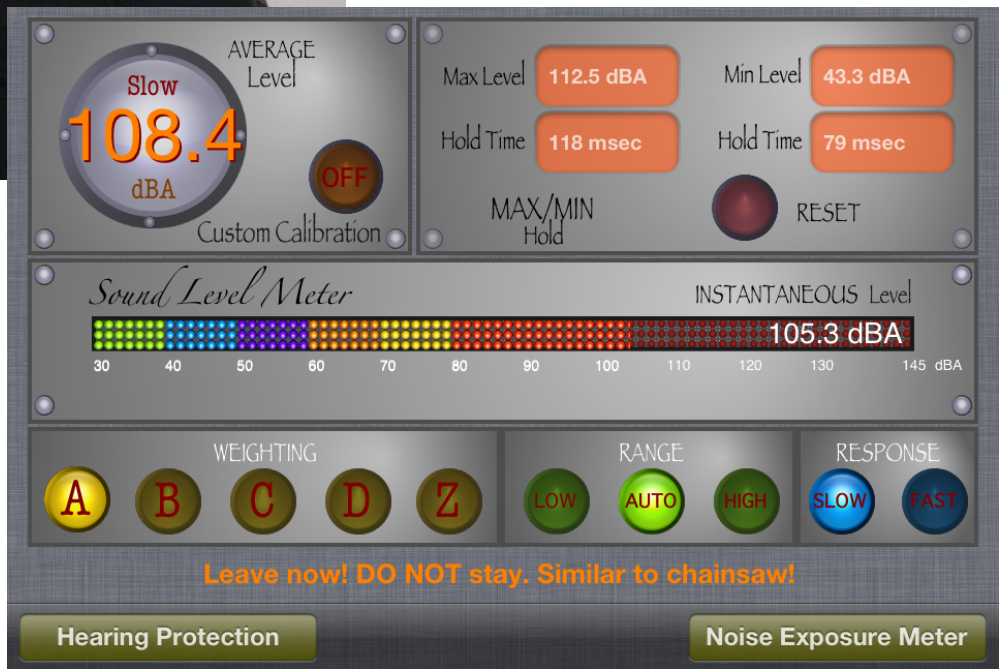
For Official Use Only

Slide courtesy of NAVAIR: PMA 202

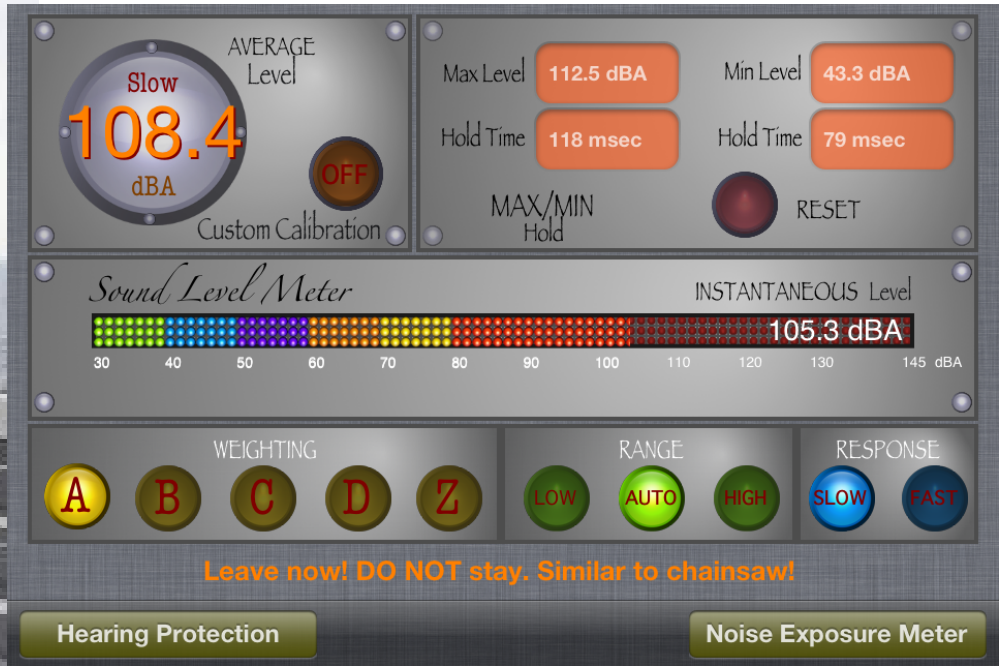
AH-1 Noise


AVERAGE Level
Fast
105.9
dBA
OFF
Custom Calibration
Max Level
112.5 dBA
Min Level
43.3 dBA
Hold Time
118 msec
Hold Time
79 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
107.5 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Leave now! DO NOT stay. Similar to snowblower!
Hearing Protection
Noise Exposure Meter

AH-1 Noise


AVERAGE Level
Slow
108.4
dBA
OFF
Custom Calibration
Max Level
112.5 dBA
Min Level
43.3 dBA
Hold Time
118 msec
Hold Time
79 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
105.3 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Leave now! DO NOT stay. Similar to chainsaw!
Hearing Protection
Noise Exposure Meter

UH-1 Noise


AVERAGE Level
Slow
108.4
dBA
OFF
Custom Calibration
Max Level
112.5 dBA
Min Level
43.3 dBA
Hold Time
118 msec
Hold Time
79 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
105.3 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Leave now! DO NOT stay. Similar to chainsaw!
Hearing Protection
Noise Exposure Meter

H-53 Noise

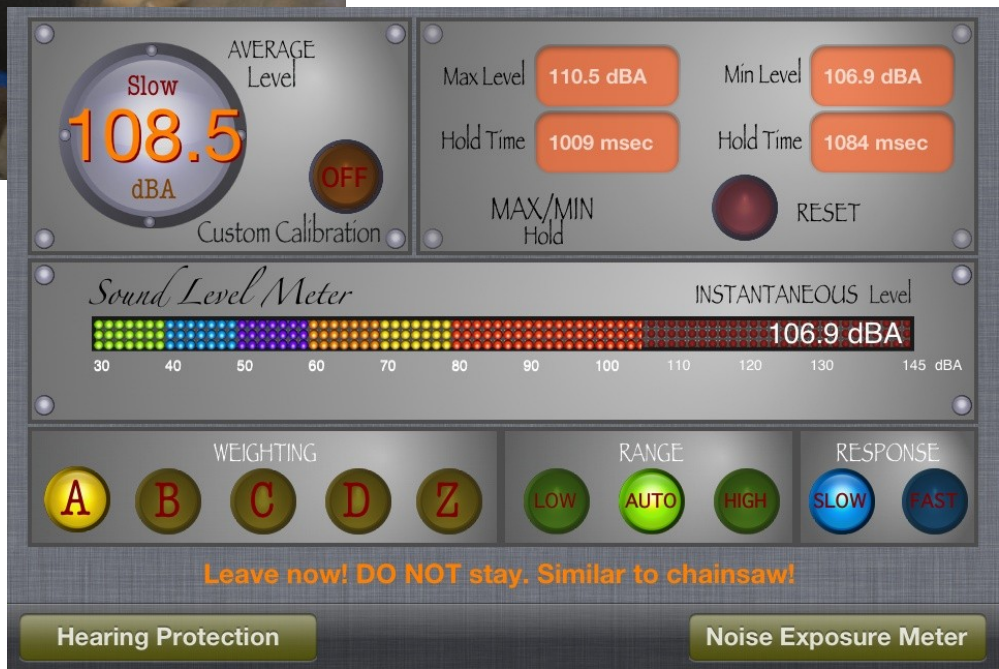
AVERAGE Level
Fast
109.0
dBA
OFF
Custom Calibration
Max Level
111.0 dBA
Min Level
43.3 dBA
Hold Time
49 msec
Hold Time
79 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
109.0 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Leave now! DO NOT stay. Similar to snowblower!
Hearing Protection
Noise Exposure Meter

H-53 Noise

MARINES
366

AVERAGE Level
Slow
110.4
dBA
OFF
Custom Calibration
Max Level
110.5 dBA
Min Level
110.0 dBA
Hold Time
179 msec
Hold Time
1187 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
110.5 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Risk of hearing damage! Less than 15 minutes/day! Similar to woodworking, factory machinery.
Hearing Protection
Noise Exposure Meter

H-53 Noise


AVERAGE Level
Slow
108.5
dBA
OFF
Custom Calibration
Max Level
110.5 dBA
Min Level
106.9 dBA
Hold Time
1009 msec
Hold Time
1084 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
106.9 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Leave now! DO NOT stay. Similar to chainsaw!
Hearing Protection
Noise Exposure Meter

H-46 Noise

02

AVERAGE Level
Slow
106.0
dBA
OFF
Custom Calibration
Max Level
106.0 dBA
Min Level
101.6 dBA
Hold Time
99 msec
Hold Time
1076 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
107.4 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Leave now! DO NOT stay. Similar to snowblower!

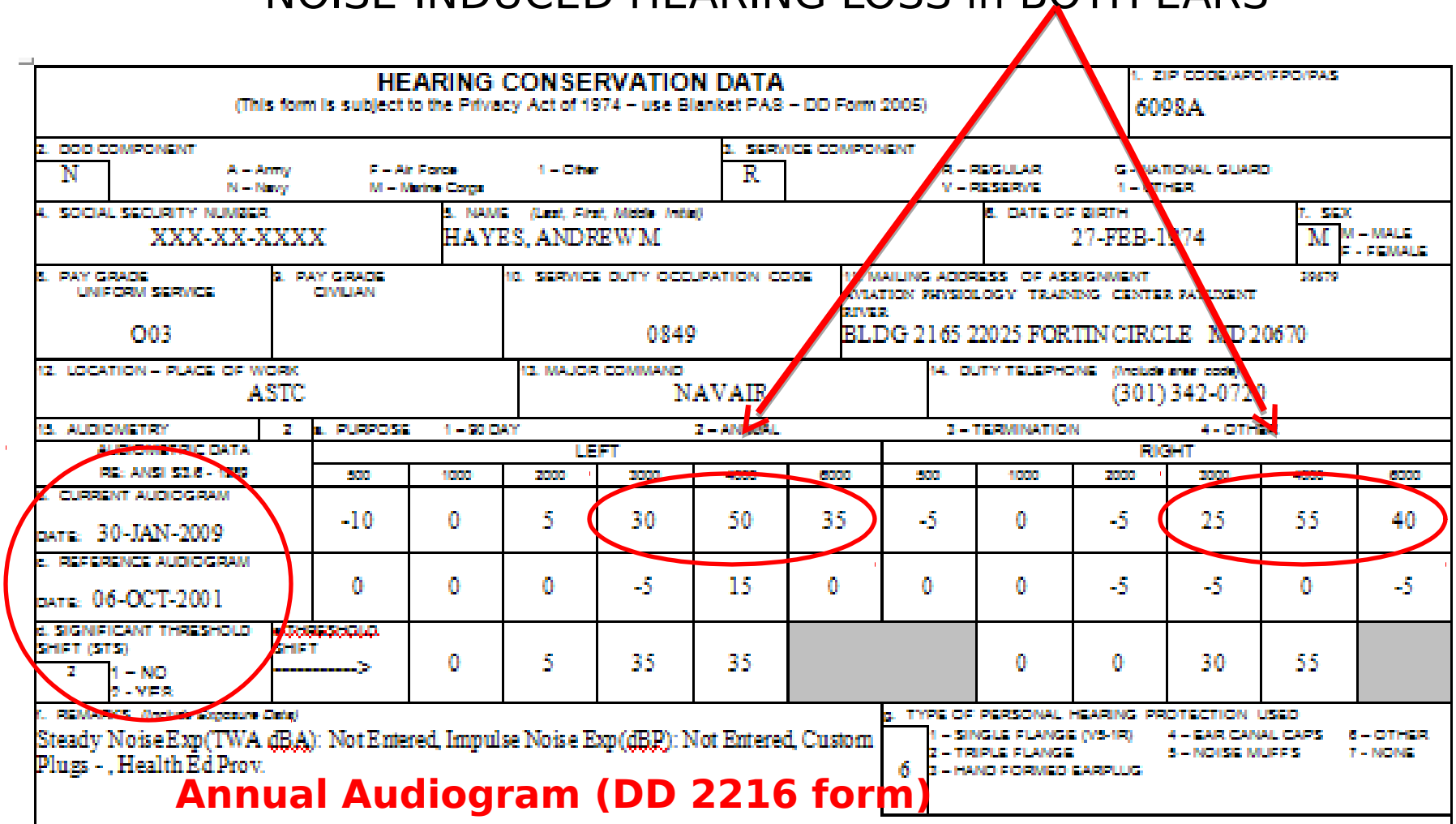
V-22 Noise

AVERAGE Level
Fast
107.0
dBA
OFF
Custom Calibration
Max Level
110.7 dBA
Min Level
95.0 dBA
Hold Time
39 msec
Hold Time
59 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
106.2 dBA
60
70
80
90
100
110
120
130
145 dBA
WEIGHTING
A
B
C
D
Z
RANGE
LOW
AUTO
HIGH
RESPONSE
SLOW
FAST
Leave now! DO NOT stay. Similar to snowblower!
Hearing Protection
Noise Exposure Meter

AV-8, EA-6, F-18 Noise 130-150 dBA

Audiometric Interpretation

Example of an STS comparing Annual (2009) to Reference (2001)
Member demonstrates a MODERATE (55dB)
NOISE-INDUCED HEARING LOSS in BOTH EARS



HEARING CONSERVATION DATA
(This form is subject to the Privacy Act of 1974 – use Blanket PAS – DD Form 2005)

1. ZIP CODE/APO/FPO/PAS: 6098A

2. DOD COMPONENT: N (A – Army, N – Navy, F – Air Force, M – Marine Corps, I – Other)

3. SERVICE COMPONENT: R (R – REGULAR, V – RESERVE, G – NATIONAL GUARD, I – OTHER)

4. SOCIAL SECURITY NUMBER: XXX-XX-XXXX

5. NAME (Last, First, Middle Initial): HAYES, ANDREW M

6. DATE OF BIRTH: 27-FEB-1974

7. SEX: M (M – MALE, F – FEMALE)

8. PAY GRADE UNIFORM SERVICE: O03

9. PAY GRADE CIVILIAN:

10. SERVICE DUTY OCCUPATION CODE: 0849

11. MAILING ADDRESS OF ASSIGNMENT: 20670
AVIATION PHYSIOLOGY TRAINING CENTER PATUXENT RIVER
BLDG 2165 22025 FORTIN CIRCLE MD 20670

12. LOCATION – PLACE OF WORK: ASTC

13. MAJOR COMMAND: NAVAIR

14. DUTY TELEPHONE (Include area code): (301) 342-0720

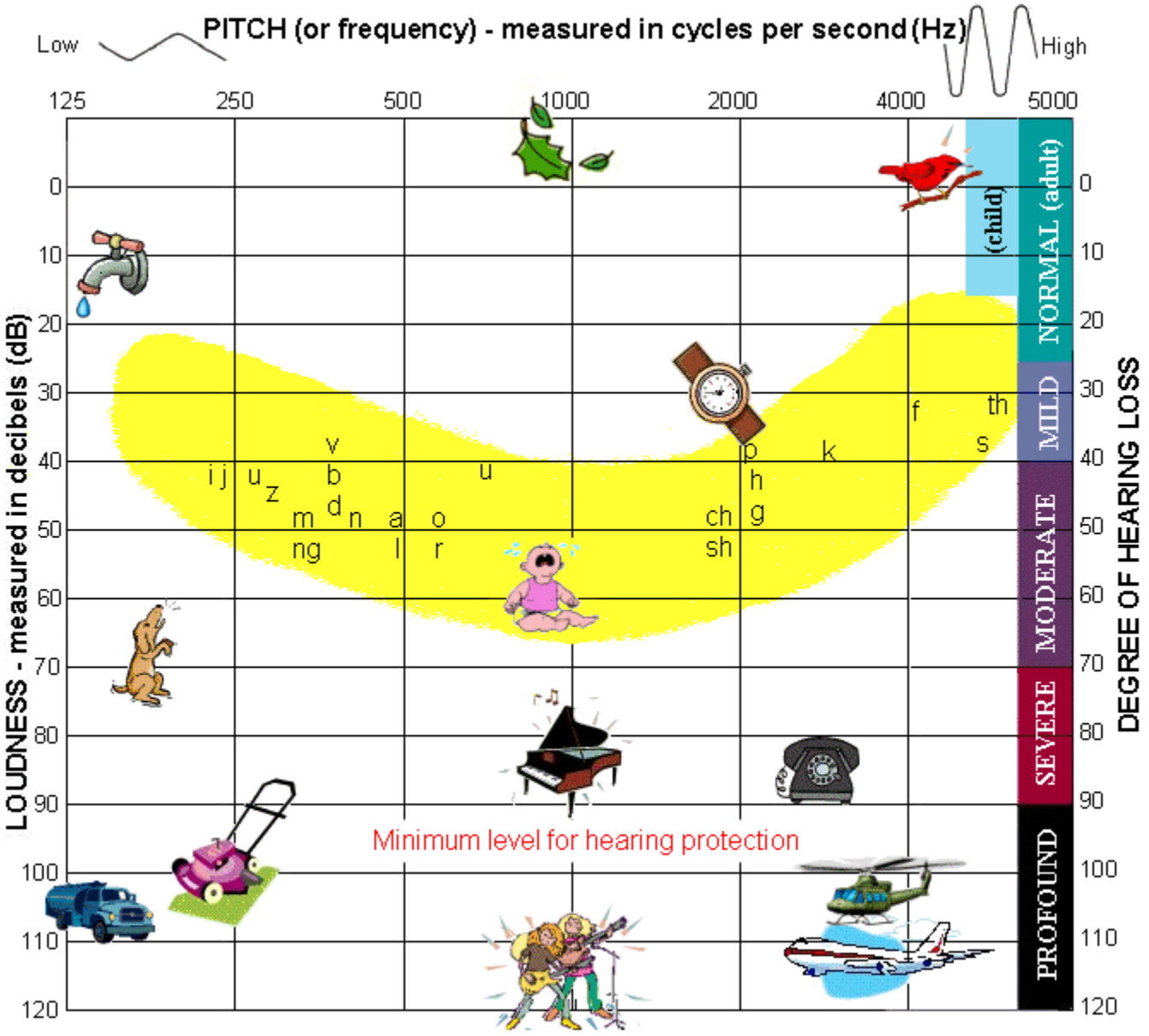
15. AUDIOMETRY: 2 (a. PURPOSE: 1 – 90 DAY, 2 – ANNUAL, 3 – TERMINATION, 4 – OTHER)

AUDIOMETRIC DATA (RE: ANSI S3.6 - 1969)	LEFT 500	LEFT 1000	LEFT 2000	LEFT 3000	LEFT 4000	LEFT 6000	RIGHT 500	RIGHT 1000	RIGHT 2000	RIGHT 3000	RIGHT 4000	RIGHT 6000
c. CURRENT AUDIOGRAM DATE: 30-JAN-2009	-10	0	5	30	50	35	-5	0	-5	25	55	40
d. REFERENCE AUDIOGRAM DATE: 06-OCT-2001	0	0	0	-5	15	0	0	0	-5	-5	0	-5
e. SIGNIFICANT THRESHOLD SHIFT (STS): 2 (1 – NO, 2 – YES)	f. FOREGROUND SHIFT ---------->	0	5	35	35			0	0	30	55	

17. REMARKS (Include Noise Exposure Data)
Steady Noise Exp(TWA dBA): Not Entered, Impulse Noise Exp(dBP): Not Entered, Custom Plugs - , Health Ed Prov.

18. TYPE OF PERSONAL HEARING PROTECTION USED: 6 (1 – SINGLE FLANGE (VS-IR), 2 – TRIPLE FLANGE, 3 – HAND FORMED EARPLUG, 4 – EAR CANAL CAPS, 5 – NOISE MUFFS, 6 – OTHER, 7 – NONE)

Annual Audiogram (DD 2216 form)


PITCH (or frequency) - measured in cycles per second (Hz)
Low
High
125
250
500
1000
2000
4000
5000
LOUDNESS - measured in decibels (dB)
DEGREE OF HEARING LOSS
0
10
20
30
40
50
60
70
80
90
100
110
120
(child)
NORMAL (adult)
MILD
MODERATE
SEVERE
PROFOUND
i j u z v b d m n ng a l o r u p h k ch g sh f th s
Minimum level for hearing protection

Student Naval Aviator Applicants (MANMED 15-86)

LEFT						RIGHT					
500	1000	2000	3000	4000	6000	500	1000	2000	3000	4000	6000
≤25	≤25	≤25	≤45	≤55	NA	≤25	≤25	≤25	≤45	≤55	NA

≤ 30 dB in the better ear
≤ 50 dB in the worse ear
@ 2000 Hz

Class I Aviation Personnel (MANMED 15-85)

LEFT						RIGHT					
500	1000	2000	3000	4000	6000	500	1000	2000	3000	4000	6000
≤35	≤30	≤30	NA	NA	NA	≤35	≤30	≤50	NA	NA	NA

≤ 30 dB in the better ear
≤ 50 dB in the worse ear
@ 2000 Hz

US Navy Flight Deck Hearing Protection and Communication Products Currently Being Deployed by Aegisound

Aegisound

- Recipient of >$30M in US DoD R&D investment since ATI inception in 1997
-
  - 15+ advanced and patented products developed and transitioned to production (50+ SBIR programs, R&D contracts, and transition programs)

- Prime contractor to the Navy and Air Force, subcontractor to Lockheed Martin

  - Producing hearing protection and communication systems for US Navy Flight Deck Maintainers

US Navy Flight Deck Hearing Protection and Communication Products Currently Being Deployed

DC2

- 50,000+ DC2 sets sold for Navy flight deck maintainers hearing protection
- DC2 (05-028001) single hearing protector can be worn with generic or custom molded earplugs
- Compatible with legacy cranial (bump-cap)
- Designed for use with the APC-2G next generation cranial
- NSN assigned

CTE30X + DC2

- CTE30X (05-001003) + DC2 (05-028001)
- Both products are US Navy Flight Deck specification PMA202-08000/R4 compliant
  - 6,000 CTE30X custom molded earplug sets sold (2007-2011) for Navy flight deck maintainer's hearing protection
- CTE30X snaps into DC2 earcups for integrated double hearing protection
- CTE30X recommended in NAVAIR 13-1-6.7-3 (Aircrew Personal Protective Equipment)
- Compatible with legacy and future maintainer head protection products

CTE30X

DC2

Argonaut® DHP Communication

- Argonaut® DHP Comm. Headset
  - Delivered 1000+ headsets to Navy
  - Delivering 4000+ headsets to Navy in 2015-2016
  - Digital Noise Canceling Microphone
  - Integrated double hearing protection
  - Both custom (LPCCE) and generic communication earplugs are available
- Compatible with legacy and APC-2G maintainer head protection products
- Provides excellent speech intelligibility in extreme ambient noise fields

Argonaut® DHP

Comm. Earplugs

Low Profile CCE

- Developed based on request from MCAS New River
- Same digital manufacturing process and material composition as previously qualified CTE30X
- Low Profile design avoids earcup interference – permits replacement and interchangeability with foam tips
- Sold 600+ in 2012-14 to Marines, Coast Guard, etc.

F-35 Maintainer Hearing Protection and Communications Systems Currently Being Deployed

(DANR DHP & DANR DHPC - Triple Hearing Protection)

DANR DHP / DANR DHPC

- Digital Active Noise Reduction (DANR) Double Hearing Protection (DHP) with and without *modular* communications (C)
- Digital Noise Canceling (DNC) microphone
- Custom molded DANR earplugs deliver a *third* layer of hearing protection with communications (no speakers are in the headset)
- NAVSEA approved, rechargeable lithium ion battery and charger options
- 600 DANR DHP (non-comm) kits sold and delivered to LM
- 201 DANR DHPC (comm enabled) kits sold and delivered to LM

Protection + Communication in 150 dB

JSF DANR DHP

- Aegisound P/N 05-005100 (kit) includes:
  - DANR headset + 1 battery
  - 1 spare battery
  - 1 2-gang charger
- Custom DANR earplugs provided separately
- Hearing protector only (non-comm. variant)

JSF DANR DHPC Kit Contents

- Comms High Level HPD
- Includes:
  - DANR DHPC headset + 1 battery
  - 3 spare battery packs
  - 1 12ft JSF intercom cable
  - 1 2-gang charger
- Custom DANR earplugs provided separately

DANR DHPC Speech Intelligibility Comparison

In a typical 130 dB jet noise environment…

With the status quo communication headset, you can understand random words,outside of any context,

0% of the time

With the DANR DHPC headset, you can understand random words, outside of any context,

77% of the time!

DANR DHP & DHPC Hearing Protection Comparison

In a typical 130 dB jet noise environment…

You can wear the status quo for ***35 seconds*** before you are at risk for long term hearing loss…

In the same noise field, you can wear the DANR DHP(C) for ***2.5 hours***!

Distribution Numbers

- Since 2007, Aegisound has been delivering a number of new products to the Navy for maintainer hearing protection and communications
  - 6,000 CTE30X custom earplugs
  - 4,000 foam and earseal upgrade kits
  - 1,200 MAX40 double hearing protectors
  - 50,000+ DC2 hearing protectors (1,000’s more on order)
  - 1,020 Argonaut® DHP Communication systems (1,000’s more on order)
  - 10’s of thousands of spare and replacement items delivered
- Since 2009, Aegisound has been delivering several new products to Lockheed Martin for F-35 maintainer hearing protection and communications
  - 600 DANR DHP (non-comm) kits sold and delivered to LM
  - 200 DANR DHPC (comm enabled) kits sold and delivered to LM

- Aegisound has several new products that are currently available that will further enhance protection, safety, and productivity for maintainers

Products Currently Available for the Naval Aviators and Aircrew

Aircrew Hearing Protection
CEP with foam and custom earplugs

HGU-68/P
Navy Fixed Wing
Helmet with
VENTED CEP

HGU-84/P
Navy Rotary Wing
Helmet with
NOT VENTED CEP

Oregon Aero Softseal ear cushions for use with the HGU-84

Product Name:

- **Softseal Ear Cushions**

Manufacture:

- **Oregon Aero**

Features:

- **Better hearing protection than stock ear cushion.**
- **More comfortable than plastic stock ear cushion.**

Aircrew Hearing Protection

David Clark with active noise attenuation

Products in Development for Naval Aviators and Aircrew

Vented Custom Hearing Protection

Earplug Pressure Equalization During Flight
Dr. Talcott, NAVAIR
2014 SAFE conference2014

- Introduction: The Navy currently requires fixed wing aircraft pilots and aircrew to use vented earplugs to reduce the risk of otitic barotrauma; however vents may significantly reduce earplug noise attenuation, leading to increased risk of noise-induced hearing damage. The objective of this study was to determine the need for a venting requirement through the evaluation of pressure equalization capabilities of earplugs used by pilots and aircrew.

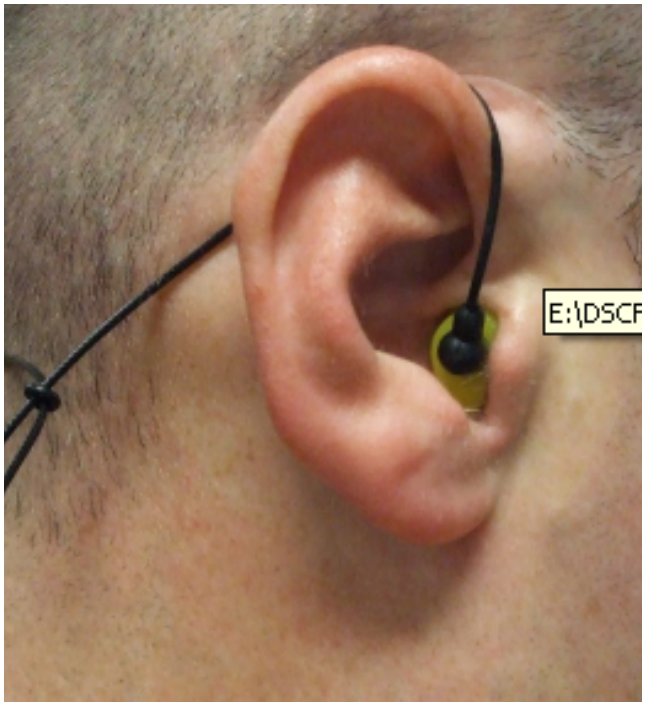
- Methods: Pressure equalization of 14 earplugs: vented and non-vented custom-molded earplugs, vented and non-vented Communications Earplugs (CEPs) with foam and custom-molded eartips (CEP402-C05, CEP505-C11, CEP505-C11-V, and CEP508-C15), vented and non-vented Attenuating Custom Communications Earpiece System (ACCESR) earplugs, Sound GuardT foam earplugs, and QuattroT Quad-flange earplugs were compared to that of the open ear during simulated flight profiles. Earplugs were evaluated using a custom ear canal simulator test rig in a small unmanned altitude chamber. Rate of ascent and descent, maximum altitude, and hold time at altitude were additional independent variables.

- Results: Analysis shows that of the earplugs evaluated; only the QuattroT produced enough pressure differential to potentially cause otitic barotrauma. These failures to equalize pressure did not occur on every trial and were observed for multiple flight profiles. When failure to equalize did occur, it tended to be present on both ascent and descent. There were small changes in pressure observed for some of the other earplugs, including CEPs with foam eartips. It is unclear if these pressure changes were due to failure to equalize or drifts in sensor readings.

- Discussion: Results suggest that QuattroT quad-flange earplugs should not be used during tactical jet flight due to their potential to prevent pressure equalization in the ear canal. More testing should be done to evaluate their suitability for other applications, such as rotary aircraft flight. Results do not support the need to vent communications earplugs for use in fixed wing aircraft.

Aircrew Hearing Protection
CEP with custom ear

HGU-68/P
Navy Fixed Wing
Helmet with
VENTED CEP
(*not yet approved



HGU-84/P
Navy Rotary Wing
Helmet with
NOT VENTED CEP
(approved for

In-Ear Dosimetry

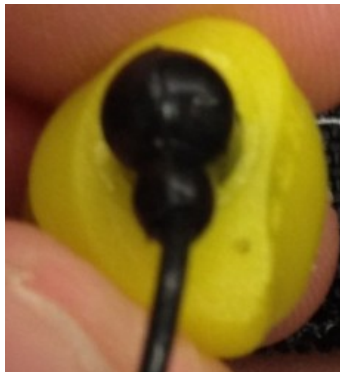
Background: In-Ear Dosimetry

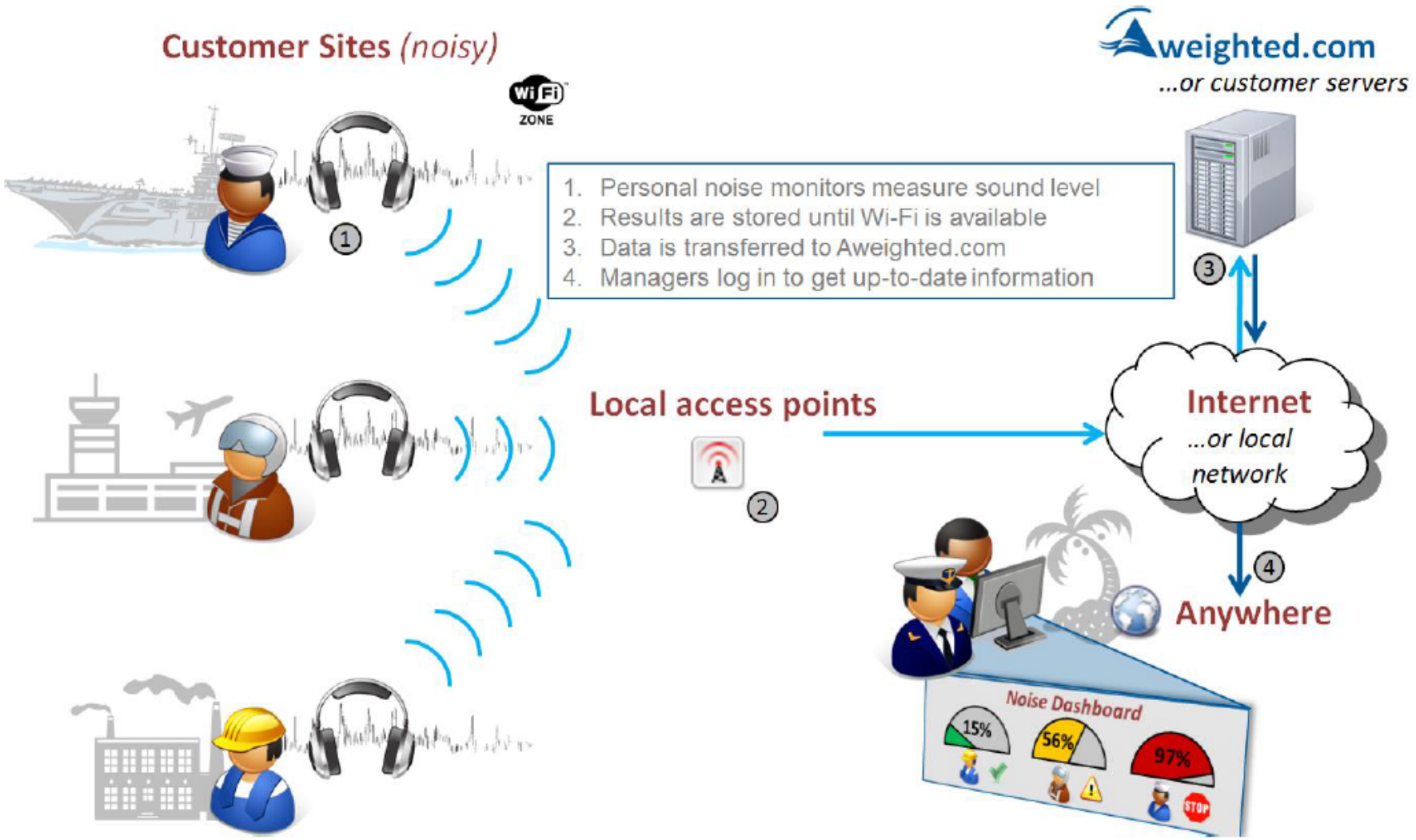
There are multiple methods of calculating total daily exposure (TDE) for the purpose of real time administrative controls and personnel management in high noise environments.

Three methods are considered:

1. Device NRR performance values with any associated regulatory de-rating guidance
2. Personal Attenuation Ratings (PAR) with known external noise fields
3. Real time in-ear noise measurement for continuous calculation of dose.

Aw8 is a dosimeter with three microphones.




Customer Sites (noisy)
Aweighted.com
...or customer servers
Wi Fi ZONE
1. Personal noise monitors measure sound level
2. Results are stored until Wi-Fi is available
3. Data is transferred to Aweighted.com
4. Managers log in to get up-to-date information
1
2
3
4
Local access points
Internet
...or local network
Anywhere
Noise Dashboard
15%
56%
97%
STOP

Aweighted.com - Internet Explorer provided by Dell
https://aweighted.com/home.zul
Certificate error
:: SiteBar ::
\\ati00830\User Docs\ehschiller\...
Google News
Aweighted.com

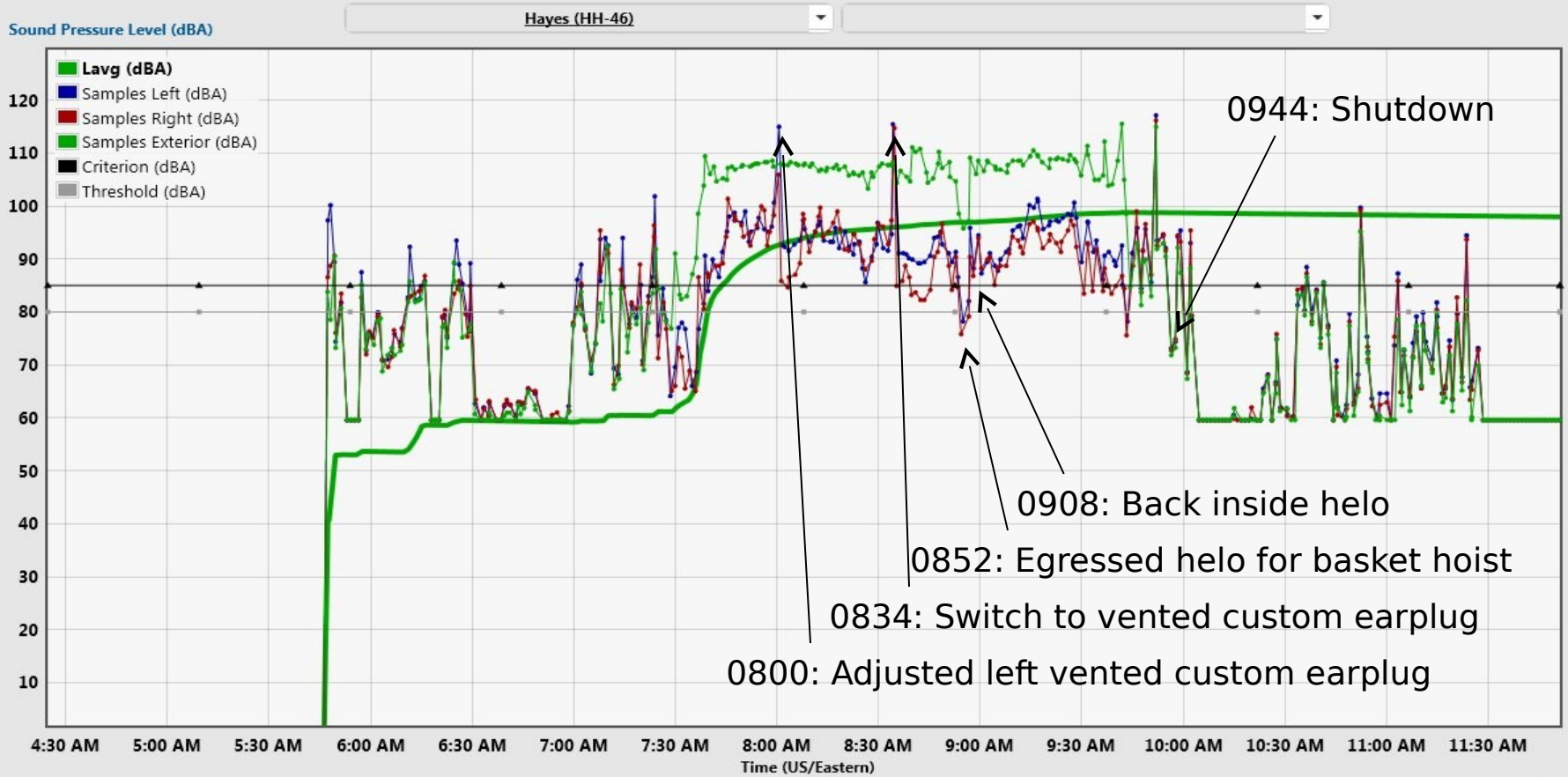
Measurements

Lavg, Exterior

day of Nov 06, 2013

DoD misc. - DoDI 6055.12 (2010)

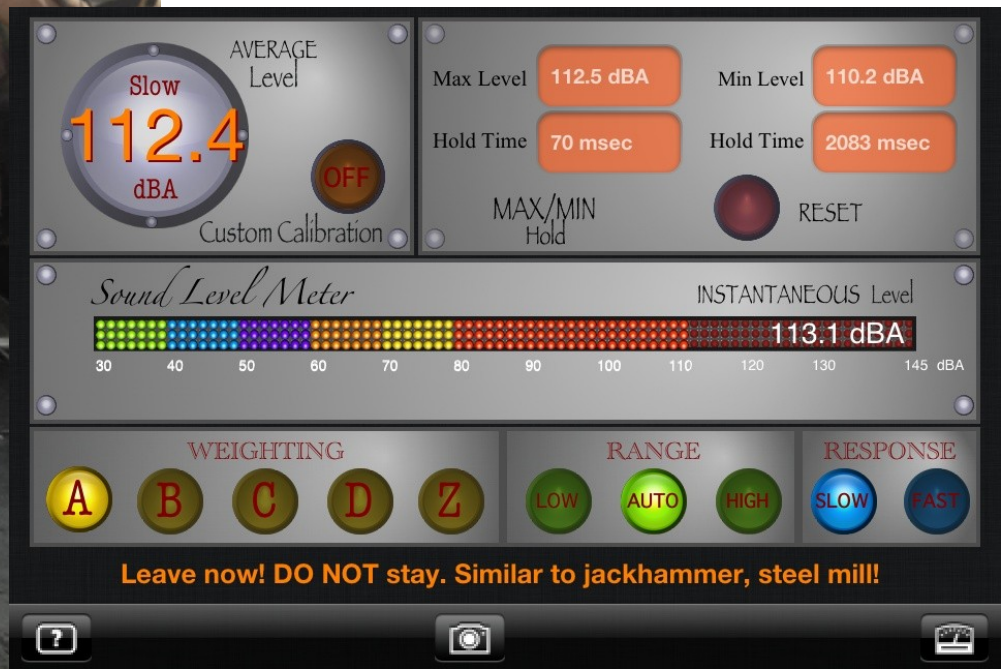
Tools
Home Options Setup Help



Select an area to zoom. Double-click to reset.

© 2013 Adaptive Technologies Inc

H-46 Noise


AVERAGE Level
Slow
112.4
dBA
OFF
Custom Calibration
Max Level
112.5 dBA
Min Level
110.2 dBA
Hold Time
70 msec
Hold Time
2083 msec
MAX/MIN Hold
RESET
Sound Level Meter
INSTANTANEOUS Level
113.1 dBA
30 40 50 60 70 80 90 100 110 120 130 145 dBA
WEIGHTING
A B C D Z
RANGE
LOW AUTO HIGH
RESPONSE
SLOW FAST
Leave now! DO NOT stay. Similar to jackhammer, steel mill!

Navy Audiology Specialty Leader Update

Navy Audiology Specialty Leader Update

- Hearing injury rates have declined to 11.5%.
- Navy compliance (85.8%) has met target (85%) compliance threshold. USMC compliance (63.2%) is below target compliance threshold.
- The percentage of the Navy and USMC population with normal hearing has increased from 71% in 2001 to 82% in 2013.

DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
7700 ARLINGTON BOULEVARD
FALLS CHURCH, VA 22042

IN REPLY REFER TO
5100
Ser M00/14AT-0287204
21 Apr 2014

MEMORANDUM FOR COMMANDER, NAVY MEDICINE EAST
COMMANDER, NAVY MEDICINE WEST

Subj: GUIDANCE ON THE DISPOSITION OF ACTIVE DUTY AND RESERVE ACCESSIONS FAILING TO MEET HEARING REQUIREMENTS

Ref: (a) DoD Instruction 6130.03 of April 28, 2010
(b) NAVMED P-117, Manual of the Medical Department, Article 15-38

Encl: (1) Guidelines on New Accessions and Hearing Loss

1. Enclosure (1) provides Department of the Navy guidance regarding the evaluation and disposition of accessions failing to meet the hearing requirements specified in references (a) and (b).

2. Please ensure your medical treatment facilities responsible for processing enlisted and officer accessions are aware and comply with the guidelines.

3. My point of contact for this matter is CDR Joel Bealer, MSC, USN, at 703-681-5392 or via e-mail at joel.bealer@med.navy.mil.

M. L. NATHAN

Guidelines on New Accessions and Hearing Loss

Individuals seeking to serve in the Navy or Marine Corps are required to meet minimal health standards as specified in DODI 6130.03. Occasionally, the services may elect to waive certain conditions in order to meet manpower requirements. Hearing loss, however, is not a condition that may be considered for waiver. Military Entrance Processing Stations are effective in screening candidates. Occasionally, some individuals report to training commands before the condition is identified. The purpose of this document is to provide guidance on the evaluation and disposition of new Navy and Marine Corps accessions who fail to meet hearing standards.

1. Identification

a. All active duty and reserve personnel in the Navy and Marine Corps are required to obtain a reference audiogram at their initial point of training. Reference audiogram results are documented on DD Form 2215, placed in the medical record, and serve as the baseline to compare future hearing performance.

b. The initial reference audiogram should occur as early in the training cycle as possible to facilitate the evaluation and disposition process.

c. Minimal hearing performance standards as specified in DODI 6130.03 and the Manual of the Medical Department are:

(1) Pure tone thresholds at 500, 1000, and 2000 cycles per second for each ear of not more than 30 decibels (dB) on the average with no individual level greater than 35 dB at those frequencies.

(2) Pure tone level not more than 45 dB at 3000 cycles per second or 55 dB at 4000 cycles per second for each ear.

(3) There is no standard for 6000 cycles per second.

(4) Individuals failing to meet minimal hearing performance standards on their initial DD Form 2215 must be referred to an audiologist for full diagnostic evaluation.

Quarterly STS reports with MRRS's compliance rate sharing

STS Rate II MAW 2014 - Microsoft Excel

	A	B	C	D
1	Tested Personnel's UIC/WIC	N w/Periodic	N w/STS on Periodic	% w/STS on Per-iodic
2	Totals: M00073 - HQ MACG-28	112	19	17%
3	Totals: M00272 - MWSS-272	430	71	17%
4	Totals: M01263 - VMM-263 MAG-26	135	20	15%
5	Totals: M00271 - MWSS-271	595	73	12%
6	Totals: M01365 - VMM-365 MAG-26	258	28	11%
7	Totals: M00207 - HQ MWCS-28	698	71	10%
8	Totals: M01261 - VMM-261 MAG-26	62	6	10%
9	Totals: M01269 - HMLA-269 MAG-29	436	42	10%
10	Totals: M00014 - HQ-MAG-14	221	21	10%
11	Totals: M01227 - MALS-29 MAG-29	917	87	9%
12	Totals: M01012 - VMAQ-4 MAG-14	190	18	9%
13	Totals: M01490 - VMU-2 MAG-14	321	30	9%
14	Totals: M01464 - HMH-464 MAG-29	280	26	9%
15	Totals: M01162 - VMM-162 MAG-26	152	14	9%
16	Totals: M01264 - VMM-264 MAG-26	241	22	9%
17	Totals: M01366 - HMH-366 MAG-29	416	38	9%
18	Totals: M01074 - MAL-26 MAG-26	671	61	9%
19	Totals: M01181 - HMHT-302 MAG-29	344	31	9%
20	Totals: M01223 - VMA-223 MAG-14	105	9	9%
21	Totals: M01266 - VMM-266 MAG-26	224	19	8%
22	Totals: M01171 - VMMT-204 MAG-26	438	37	8%
23	Totals: M01238 - VMAQ-2 MAG-14	207	16	8%
24	Totals: M01461 - HMH-461 MAG-29	415	32	8%
25	Totals: M01252 - VMGR-252 MAG-14	488	37	8%
26	Totals: M01068 - MALS-31 MAG-31	1,167	88	8%
27	Totals: M01145 - MTACS-28 MACG-28	134	10	7%
28	Totals: M01169 - HMLA-167 MAG-29	469	35	7%
29	Totals: M00870 - MACS-2 MACG-28	421	29	7%
30	Totals: M00820 - MASS-1 MACG-28	239	16	7%
31	Totals: M01203 - VMAT-203 MAG-14	198	12	6%
32	Totals: M01467 - HMLA-467 MAG-29	321	18	6%
33	Totals: M00852 - DET A ATC MACS-2 MACG-28	130	7	5%
34	Totals: M01231 - VMA-231 MAG-14	266	11	4%
35	Totals: M00026 - HQ MAG-26	2	0	0%
36	Totals: M00029 - HQ MAG-29	4	0	0%
37	GRAND TOTAL	11707	1054	9%
38				

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Campaign

The HCE plans to launch an integrated campaign focused on empowering military personnel and stand, care for and protect their hearing.

Videos

The multimedia section provides videos aggregated from a variety of sources that stress the importance of hearing protection, describe the causes and impact of hearing loss and tinnitus (ringing in the ears) on military personnel well-being and mission effectiveness, and provide tips for measuring, protecting and caring for one's hearing. Over time, this section will expand to include additional information about the Hearing Center of Excellence's role in hearing conservation and educational resources for clinicians, researchers and military leaders.

Always on Duty

Creator/Producer: Hearing Center of Excellence

The Hearing Center of Excellence: Reducing the Prevalence and Costs of Hearing Loss for Warriors and Veterans

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Hearing Loss and Quality of Life

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Hearing Center of Excellence (HCE) Website Launch

Creator/Producer: Hearing Center of Excellence

acy/Videos/AlwaysOnDuty.aspx

Questions?